

362226079410101 RK-243 DENR Upper Piedmont Research Station MW-S4S (Regolith well)—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 2003 to October 2004 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 2003 to October 2004.

pH: May 2003 to October 2004.

WATER TEMPERATURE: May 2003 to October 2004.

DISSOLVED OXYGEN: May 2003 to October 2004.

DISSOLVED OXYGEN, PERCENT SATURATION: May 2003 to October 2004.

INSTRUMENTATION.-- Water-quality monitor with satellite telemetry from May 2003 to October 2004.

REMARKS.--Station operated in cooperation with North Carolina Department of Environment and Natural Resources, Water Resources Division, as part of the Piedmont/Mountains ground-water study. Dissolved oxygen, percent saturation, is computed using a barometric pressure of 750 mm Hg.

EXTREMES FOR PERIOD OF DAILY RECORD.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SPECIFIC CONDUCTANCE, microsiemens	388, August 14, 2003	312, June 7, 8, 2003
pH, standard units	7.6, October 19, 2004	6.2, on several days during the period
WATER TEMPERATURE, °C	17.3, October 19, 2004	10.7, on several days during the period
DISSOLVED OXYGEN, mg/L	0.5, on several days during the period	0.0, on many days during the period
DISSOLVED OXYGEN, PERCENT SATURATION, %	5, on several days during the period	0, on many days during the period

EXTREMES FOR CURRENT PERIOD.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SPECIFIC CONDUCTANCE, microsiemens	333, December 18, 19, 20	317, June 16, 23, 24
pH, standard units	7.6, October 19	6.2, October 1-6
WATER TEMPERATURE, °C	17.3, October 19	10.7, on several days during the period
DISSOLVED OXYGEN, mg/L	0.5, on several days during the period	0.0, on many days during the period
DISSOLVED OXYGEN, PERCENT SATURATION, %	5, on several days during the period	0, on many days during the period

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## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd, titr., mg/L as CaCO3 (00419)	Bromide, water, fltrd, mg/L (71870)	Chloride, water, fltrd, mg/L (00940)
MAR 23...	1655	.8	6.7	319	11.5	140	30.8	16.0	2.32	7.94	87	.07	16.9
Date		Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Arsenic, water, fltrd, ug/L (01000)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)	
MAR 23...		38.4	45.4	219	.15	<.06	<.008	<.006	<2	<7.0	449	563	

Remark codes used in this table:  
 < -- Less than

362226079410101 RK-243 DENR Upper Piedmont Research Station MW-S4S (Regolith well)—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	327	328	331	331	327	327	324	323	322	321	324	324
2	327	328	331	331	327	326	323	323	321	322	324	325
3	327	328	---	330	327	326	323	322	321	322	324	324
4	327	328	---	330	327	326	323	322	321	323	324	324
5	327	327	---	330	327	326	323	322	320	324	324	324
6	327	327	331	330	327	326	323	322	319	324	325	324
7	327	327	331	330	327	326	323	322	319	324	324	323
8	327	327	331	330	328	326	323	323	319	325	324	324
9	328	327	---	330	328	327	323	323	319	325	324	324
10	327	327	---	330	328	326	323	323	319	325	324	324
11	327	327	---	329	328	326	323	323	319	325	324	324
12	328	327	---	329	328	326	323	323	319	325	324	324
13	327	328	---	329	328	326	323	323	319	325	323	324
14	328	327	---	329	328	326	322	323	319	326	324	324
15	327	328	---	329	328	326	323	323	319	326	324	324
16	327	328	---	329	327	326	323	323	318	325	324	324
17	327	328	---	329	327	326	323	323	318	325	324	324
18	328	328	---	329	327	326	322	323	319	324	325	324
19	327	328	332	329	327	326	322	322	319	324	325	324
20	327	329	332	329	327	325	322	322	318	325	325	324
21	328	329	332	329	327	325	322	322	319	325	325	324
22	328	329	332	329	327	325	322	322	319	325	325	324
23	328	329	332	328	327	325	322	322	318	325	324	324
24	327	329	332	328	327	324	322	322	319	325	324	324
25	327	329	332	328	327	325	322	322	320	325	324	324
26	328	330	331	328	327	325	322	322	320	325	324	324
27	328	330	331	328	327	325	322	322	321	325	324	324
28	328	330	331	328	327	325	322	322	321	---	325	324
29	328	330	331	328	326	324	322	322	321	---	324	324
30	328	330	331	327	---	324	323	322	321	324	325	324
31	328	---	331	327	---	324	---	322	---	325	324	---
MEAN	327	328	---	329	327	326	323	322	320	---	324	324
MAX	328	330	--	331	328	327	324	323	322	--	325	325
MIN	327	327	--	327	326	324	322	322	318	--	323	323

362226079410101 RK-243 DENR Upper Piedmont Research Station MW-S4S (Regolith well)—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

[illegible]

362226079410101 RK-243 DENR Upper Piedmont Research Station MW-S4S (Regolith well)—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS  
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	6.4	6.5	6.6	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.6
2	6.2	6.4	6.5	6.6	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.6
3	6.2	6.4	---	6.6	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.5
4	6.2	6.4	---	6.6	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.5
5	6.2	6.4	---	6.6	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.6
6	6.3	6.4	6.5	6.6	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.6
7	6.3	6.4	6.5	6.6	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.6
8	6.3	6.4	6.5	6.6	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.7
9	6.3	6.4	---	6.6	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.6
10	6.3	6.4	---	6.6	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.6
11	6.3	6.4	---	6.6	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.6
12	6.3	6.4	---	6.6	6.5	6.4	6.5	6.5	6.5	6.5	6.6	6.6
13	6.3	6.4	---	6.6	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.6
14	6.3	6.4	---	6.6	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.6
15	6.3	6.4	---	6.6	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.5
16	6.3	6.4	---	6.5	6.5	6.4	6.5	6.5	6.5	6.5	6.6	6.6
17	6.3	6.4	---	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.6
18	6.3	6.4	---	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.6	6.6
19	6.3	6.4	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.5	6.6
20	6.3	6.4	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.6	6.6
21	6.3	6.4	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.6	6.6
22	6.3	6.4	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.6	6.6
23	6.3	6.4	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.6	6.7
24	6.3	6.4	6.5	6.5	6.5	6.4	6.5	6.5	6.5	6.6	6.6	6.7
25	6.3	6.4	6.5	6.5	6.5	6.4	6.5	6.5	6.5	6.6	6.6	6.7
26	6.3	6.4	6.5	6.5	6.5	6.4	6.5	6.5	6.5	6.6	6.6	6.7
27	6.3	6.4	6.5	6.5	6.5	6.4	6.5	6.5	6.5	---	6.5	6.7
28	6.4	6.5	6.6	6.5	6.5	6.4	6.5	6.5	6.5	---	6.5	6.8
29	6.4	6.5	6.6	6.5	6.5	6.4	6.5	6.6	6.5	6.6	6.5	6.7
30	6.4	6.5	6.6	6.5	---	6.4	6.5	6.6	6.5	6.6	6.6	6.7
31	6.4	---	6.6	6.5	---	6.5	---	6.5	---	6.5	6.6	---
MEAN	6.3	6.4	---	6.5	6.5	6.5	6.5	6.5	6.5	---	6.6	6.6
MAX	6.4	6.5	---	6.6	6.5	6.5	6.5	6.6	6.5	---	6.6	6.8
MIN	6.2	6.4	---	6.5	6.5	6.4	6.5	6.5	6.5	---	6.5	6.5

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

[illegible]

362226079410101 RK-243 DENR Upper Piedmont Research Station MW-S4S (Regolith well)—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.3	16.4	15.6	13.7	12.1	10.9	11.0	11.5	12.4	13.6	14.9	16.0
2	16.3	16.4	15.6	13.6	12.0	10.9	11.0	11.5	12.4	13.7	15.0	16.1
3	16.4	16.4	---	13.6	11.9	10.8	11.0	11.5	12.5	13.8	15.1	16.1
4	16.4	16.4	---	13.5	11.9	10.8	11.0	11.6	12.5	13.8	15.1	16.1
5	16.4	16.4	---	13.4	11.9	10.8	11.0	11.6	12.6	13.9	15.1	16.2
6	16.4	16.4	15.3	13.4	11.7	10.8	11.0	11.6	12.6	13.9	15.2	16.2
7	16.4	16.4	15.3	13.4	11.6	10.8	11.0	11.7	12.6	14.0	15.2	16.2
8	16.4	16.3	15.2	13.3	11.8	10.8	11.0	11.7	12.7	14.0	15.2	16.5
9	16.4	16.3	---	13.3	11.8	10.8	11.0	11.7	12.7	14.1	15.3	16.1
10	16.5	16.3	---	13.2	11.7	10.8	11.0	11.8	12.8	14.1	15.3	16.1
11	16.5	16.3	---	13.2	11.7	10.8	11.0	11.8	12.8	14.2	15.4	16.2
12	16.5	16.2	---	13.1	11.6	10.8	11.0	11.8	12.8	14.2	15.5	16.2
13	16.5	16.2	---	13.1	11.6	10.8	11.0	11.8	12.9	14.3	15.5	16.2
14	16.5	16.2	---	13.0	11.5	10.8	11.1	11.9	12.9	14.3	15.5	16.3
15	16.5	16.1	---	13.0	11.5	10.8	11.1	11.9	13.0	14.3	15.5	16.3
16	16.5	16.1	---	12.9	11.4	10.8	11.1	11.9	13.0	14.4	15.5	16.4
17	16.5	16.1	---	12.9	11.4	10.8	11.1	11.9	13.0	14.5	15.6	16.5
18	16.5	16.1	---	12.8	11.3	10.8	11.1	12.0	13.1	14.5	15.4	16.4
19	16.5	16.0	14.7	12.8	11.3	10.8	11.2	12.0	13.1	14.6	15.5	16.4
20	16.5	16.0	14.6	12.7	11.3	10.8	11.2	12.0	13.2	14.6	15.5	16.4
21	16.5	15.9	14.5	12.7	11.2	10.8	11.2	12.1	13.2	14.7	15.6	16.4
22	16.5	15.9	14.5	12.6	11.2	10.8	11.2	12.1	13.3	14.7	15.6	16.4
23	16.5	15.9	14.4	12.6	11.2	---	11.2	12.1	13.4	14.8	15.6	16.5
24	16.5	15.9	14.3	12.5	11.1	11.1	11.2	12.2	13.3	14.8	15.7	16.5
25	16.5	15.8	14.2	12.4	11.1	11.1	11.3	12.2	13.4	14.9	15.7	16.6
26	16.5	15.8	14.2	12.4	11.1	11.0	11.3	12.2	13.4	14.9	15.8	16.6
27	16.5	15.8	14.1	12.3	11.0	11.0	11.3	---	13.5	---	15.8	16.6
28	16.5	15.7	14.0	12.3	11.0	11.0	11.4	12.3	13.5	---	15.9	16.7
29	16.5	15.7	14.0	12.2	11.0	11.0	11.4	12.3	13.6	14.8	15.9	16.6
30	16.4	15.6	13.9	12.2	---	10.9	11.4	12.3	13.6	14.9	16.0	16.6
31	16.4	---	13.8	12.1	---	11.0	---	12.4	---	14.9	16.0	---
MEAN	16.5	16.1	---	12.9	11.5	---	11.1	---	13.0	---	15.5	16.3
MAX	16.5	16.4	---	13.7	12.1	---	11.4	---	13.6	---	16.0	16.7
MIN	16.3	15.6	---	12.1	11.0	---	11.0	---	12.4	---	14.9	16.0

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

[illegible]



362226079410101 RK-243 DENR Upper Piedmont Research Station MW-S4S (Regolith well)—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER  
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.1	0.0	0.3	0.2	0.5	0.2	0.2	0.1	---	---	---	---
2	0.1	0.1	0.3	0.2	0.4	0.2	0.2	0.1	---	---	---	---
3	0.1	0.1	---	0.2	0.4	0.2	0.2	0.1	---	---	---	---
4	0.1	0.2	---	0.2	0.4	0.2	0.3	0.1	---	---	---	---
5	0.1	0.3	---	0.2	0.3	0.2	0.3	0.1	---	---	---	---
6	0.1	0.3	0.4	0.2	0.2	0.2	0.3	0.1	---	---	---	---
7	0.1	0.2	0.3	0.2	0.2	0.2	0.3	0.2	---	---	---	---
8	0.1	0.3	0.3	0.2	0.1	0.2	0.3	0.2	---	---	---	---
9	0.1	0.3	---	0.2	0.1	0.2	0.3	0.2	---	---	---	---
10	0.1	0.3	---	0.2	0.1	0.2	0.3	0.2	---	---	---	---
11	0.1	0.3	---	0.3	0.1	0.2	0.3	0.2	---	---	---	---
12	0.1	0.3	---	0.3	0.1	0.2	0.4	0.2	---	---	---	---
13	0.1	0.3	---	0.3	0.1	0.2	0.4	0.2	---	---	---	---
14	0.1	0.3	---	0.3	0.1	0.2	0.4	0.2	---	---	---	---
15	0.1	0.3	---	0.3	0.1	0.2	0.3	0.2	---	---	---	---
16	0.1	0.3	---	0.3	0.2	0.2	0.3	0.2	---	---	---	---
17	0.1	0.3	---	0.3	0.2	0.2	0.3	0.2	---	---	---	---
18	0.1	0.3	---	0.3	0.1	0.2	0.4	0.2	---	---	---	---
19	0.1	0.3	0.2	0.3	0.2	0.2	0.4	0.2	---	---	---	---
20	0.1	0.3	0.2	0.3	0.1	0.2	0.4	0.2	---	---	---	---
21	0.1	0.3	0.1	0.4	0.1	0.2	0.3	0.2	---	---	---	---
22	0.1	0.3	0.1	0.4	0.1	0.2	0.3	0.2	---	---	---	---
23	0.1	0.3	0.1	0.4	0.1	---	0.4	0.2	---	---	---	---
24	0.1	0.3	0.1	0.4	0.1	0.1	0.3	0.2	---	---	---	---
25	0.1	0.3	0.2	0.4	0.1	0.1	0.2	0.2	---	---	---	---
26	0.1	0.3	0.2	0.4	0.1	0.1	0.2	0.2	---	---	---	---
27	0.1	0.3	0.1	0.4	0.2	0.1	0.1	---	---	---	---	---
28	0.1	0.3	0.2	0.4	0.2	0.2	0.1	---	---	---	---	---
29	0.1	0.3	0.2	0.5	0.2	0.2	0.1	---	---	---	---	---
30	0.1	0.3	0.2	0.5	---	0.2	0.1	---	---	---	---	---
31	0.1	---	0.2	0.5	---	0.2	---	---	---	---	---	---
MEAN	0.1	0.3	---	0.3	0.2	---	0.3	---	---	---	---	---
MAX	0.1	0.3	---	0.5	0.5	---	0.4	---	---	---	---	---
MIN	0.1	0.0	---	0.2	0.1	---	0.1	---	---	---	---	---

362226079410101 RK-243 DENR Upper Piedmont Research Station MW-S4S (Regolith well)—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1	0	3	2	5	1	2	0	---	---	---	---
2	0	0	3	2	4	2	2	0	---	---	---	---
3	0	0	---	2	4	2	2	0	---	---	---	---
4	1	2	---	2	4	2	3	0	---	---	---	---
5	0	3	---	2	3	2	3	0	---	---	---	---
6	0	3	4	2	2	2	3	0	---	---	---	---
7	0	2	3	2	2	2	3	1	---	---	---	---
8	0	3	3	2	0	2	3	2	---	---	---	---
9	0	3	---	2	0	2	3	2	---	---	---	---
10	0	3	---	2	0	2	3	2	---	---	---	---
11	0	3	---	3	1	2	3	2	---	---	---	---
12	0	3	---	3	1	2	4	2	---	---	---	---
13	0	3	---	3	1	2	4	2	---	---	---	---
14	0	3	---	3	1	2	4	2	---	---	---	---
15	0	3	---	3	1	2	3	2	---	---	---	---
16	0	3	---	3	2	2	3	2	---	---	---	---
17	0	3	---	3	2	2	3	2	---	---	---	---
18	0	3	---	3	1	2	4	2	---	---	---	---
19	0	3	2	3	2	2	4	2	---	---	---	---
20	0	3	2	3	1	2	4	2	---	---	---	---
21	0	3	1	4	0	2	3	2	---	---	---	---
22	0	3	1	4	0	2	3	2	---	---	---	---
23	0	3	1	4	0	---	4	2	---	---	---	---
24	0	3	1	4	1	0	3	2	---	---	---	---
25	0	3	2	4	0	0	2	2	---	---	---	---
26	0	3	2	4	0	0	2	2	---	---	---	---
27	0	3	1	4	2	0	0	---	---	---	---	---
28	0	3	2	4	2	1	0	---	---	---	---	---
29	0	3	2	5	1	2	0	---	---	---	---	---
30	0	3	2	5	---	2	0	---	---	---	---	---
31	0	---	2	5	---	2	---	---	---	---	---	---
MEAN	0	3	---	3	1	---	3	---	---	---	---	---
MAX	1	3	--	5	5	--	4	--	---	---	---	---
MIN	0	0	--	2	0	--	0	--	---	---	---	---